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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/684,616	10/10/2000	Takashi Hashimoto	198427US2	2258

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OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER

NGUYEN, JIMMY H

ART UNIT	PAPER NUMBER
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2673

DATE MAILED: 10/21/2003

17

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/684,616

Applicant(s)

HASHIMOTO ET AL.

Examiner

Jimmy H. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Request for Continued Examination

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on August 25th, 2003 has been entered. Claims 1-11 are currently pending in the application. An action on the RCE follows:

Claim Objections

2. Claim 9 is objected to under 37 CFR 1.75(a) because although these claims meet the requirement 112/2d, i.e., the metes and bounds are determinable, however, "intersecting with", line 20, should be changed to --parallel to--, so as to make the invention of this claim consistent with the disclosure, specifically fig. 4, which shows the barrier ribs (10) separating the non-discharge cells (NC) from the discharge cells (C) along a direction (D2) parallel with the display line or the scanning electrode X.

It is in the best interest of the patent community that applicant, in his/her normal review and/or rewriting of the claims, to take into consideration these editorial situations and make changes as necessary.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

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4. Claims 1-8, 10 and 11 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Regarding to claims above, the disclosure, when filed, does not contain sufficient information regarding to two claimed features together in a plasma display panel device and an associate method, (i) “a scan electrode including t strip portions” and (see independent claim 1, line 7, and independent claim 10, line 9) and (ii) “a sustain electrode including t strip portions” (see independent claim 1, line 10, and independent claim 10, line 12). The disclosure, specifically first embodiment as illustrated in figure 1, discloses that each of the row electrodes X1 to Xn corresponds to a strip portion of a scan electrode (see page 20, lines 21-22), and each of the row electrodes YL1 to YLn and YR1 to YRn corresponds to a strip portion of a sustain electrode (see page 20, lines 14-17). In other words, if a scan electrode includes t strip portions, a sustain electrode must include 2t strip portions (i.e., t left strip portions and t right strip portions). In other words, if a scan electrode includes t strip portions, a sustain electrode must include 2t strip portions (i.e., t left strip portions and t right strip portions). Furthermore, the disclosure, specifically third embodiment as illustrated in figure 8, discloses that each of the row electrodes X1 to Xn corresponds to a strip portion of a scan electrode, and each of the row electrodes Y1 to Yn corresponds to a strip portion, but does not disclose expressly including the claimed feature, “applying a first voltage ... discharge cell” (see independent claim 1, lines 16-19, and independent claim 10, lines 18-21). However, the disclosure does not describe in detail a combination of the first and third embodiments to arrive the claimed invention defined in

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independent claims 1 and 10, so as to enable one skilled in the pertinent art to make and use the claimed invention.

5. The following rejections to claims 1-8, 10 and 11 are based as best understood by the examiner due to the above rejection under 35 USC 112, first paragraph.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-8, 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kanazawa et al. (USPN: 6,140,984), hereinafter Kanazawa, and further in view of Ryan et al. (USPN: 4,090,109), hereinafter Ryan.

As per claims 1, 2, 5, 6 and 10, Kanazawa discloses a plasma display panel (PDP) device and an associate method, the PDP device (see fig. 23) comprising an AC plasma display panel (PDP 2), which comprises an address electrode (address electrodes 209/A1-Am) including t strip portions (i.e., each of address electrode A1-Am corresponding to each strip portion, see fig. 2), t discharge cells (see fig. 2), a scan electrode (Y electrode 208) including t strip portions (i.e., each of electrodes Y1 to YN corresponding to the claimed strip portion), a sustain electrode (X electrode 207) including t strip portions (i.e., each of electrodes X1 to XN corresponding to the claimed strip portion), and a dielectric substance (a dielectric layer 207C, best seen in fig. 3, col. 2, line 65), and a driving unit (a driving unit comprising drivers 22, 27, 28, 30 and 31, see fig. 23) for applying a prescribed voltage Va to address electrodes (see fig. 26), applying a prescribed

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voltage (-VY) to each of electrodes Y1-YN (see fig. 23), and applying a first voltage (VX) to odd electrodes (X1, X3, ...) while applying a second voltage (OV) to remaining all of the electrodes (X2, X4, ...) for forming desired discharge only in single discharge cell during a period of odd line scan (see fig. 26). Accordingly, the difference between the Kanazawa reference and the invention defined in claims above is the strip portions of the address electrode being connected to an output terminal of the driving unit in common.

However, Ryan discloses that strip portions (electrodes 36, see fig. 1) of the address electrode, being connected to an output terminal (P1, P2, ...) of the driving unit (a unit including phased shift voltage generator, see fig. 1) in common is well-known to one skilled in the art at the time of the invention was made (col. 1, lines 55-59). It would have been obvious to one skilled in the art at the time of the invention was made to utilize Ryan's teaching, i.e., providing strip portions of the address electrodes, being connected to a common output terminal of the driving unit, in the PDP of Kanazawa because this would reduce number of addressing circuits connected to the electrodes, as taught by Ryan (col. 1, lines 50-59), thereby reducing the cost of manufacturing the PDP device.

Regarding to claims 3 and 4, as noting in figs. 25 and 26, Kanazawa further teaches that the first potential difference, $[50V - (-150V) = 200V]$, is larger than the second potential difference, which is substantially equal to zero volt (OV), because the even sustain electrode X is at the ground potential and hence no discharge transition takes place in the pair of the scanning electrode Y and the even sustain electrode X.

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Regarding to claims 7 and 8, as noting in fig. 26 and at col. 20, lines 34-42), Kanazawa further teaches that after the period of odd line scan, forming the first or second auxiliary discharge.

Regarding to claim 11, Kanazawa further teaches the PDP comprising a plurality of non-discharge cells (non-discharge slits, see abstract) having non-discharge gaps (gaps about 200 micrometer, see fig. 25, col. 14, lines 24-28), each of discharge cells having a discharge gap about 100 micrometer (discharge slits, see fig. 25, col. 14, lines 24-28) and a plurality of barrier ribs (ribs or barriers 207E, best seen in fig. 1, col. 14, line 17).

8. Claims 1-8, 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kanazawa et al. (USPN: 6,140,984), hereinafter Kanazawa, and further in view of Nakayama et al. (USPN: 3,881,129), hereinafter Nakayama.

As per claims 1, 2, 5, 6 and 10, Kanazawa discloses a plasma display panel (PDP) device and an associate method, the PDP device (see fig. 23) comprising an AC plasma display panel (PDP 2), which comprises an address electrode (address electrodes 209/A1-Am) including t strip portions (i.e., each of address electrode A1-Am corresponding to each strip portion, see fig. 2), t discharge cells (see fig. 2), a scan electrode (Y electrode 208) including t strip portions (i.e., each of electrodes Y1 to YN corresponding to the claimed strip portion), a sustain electrode (X electrode 207) including t strip portions (i.e., each of electrodes X1 to XN corresponding to the claimed strip portion), and a dielectric substance (a dielectric layer 207C, best seen in fig. 3, col. 2, line 65), and a driving unit (a driving unit comprising drivers 22, 27, 28, 30 and 31, see fig. 23) for applying a prescribed voltage V_a to address electrodes (see fig. 26), applying a prescribed voltage ($-V_Y$) to each of electrodes Y1-YN (see fig. 23), and applying a first voltage (V_X) to

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odd electrodes (X1, X3, ...) while applying a second voltage (OV) to remaining all of the electrodes (X2, X4, ...) for forming desired discharge only in single discharge cell during a period of odd line scan (see fig. 26). Accordingly, the difference between the Kanazawa reference and the invention defined in claims above is the strip portions of the address electrode being connected to an output terminal of the driving unit in common.

However, Nakayama expressly teaches that strip portions (column electrodes Y1, Y4, Y7, ..., see fig. 2) of the address electrode is connected to an output terminal (SA) of the driving unit (an inherent driving unit supplies the voltages to electrodes Y1, Y2, ..., Yk, via terminals SA, SB and SC, fig. 2, col. 3, lines 41-47), strip portions (column electrodes Y2, Y5, ..., see fig. 2) of the address electrode is connected to an output terminal (SB) of the driving unit, and strip portions (column electrodes Y3, Y6, ..., see fig. 2) of the address electrode is connected to an output terminal (SC) of the driving unit. It would have been obvious to one skilled in the art at the time of the invention was made to utilize Nakayama's teaching, i.e., providing strip portions of the address electrodes, being connected to a common output terminal of the driving unit, in the PDP of Kanazawa because this would reduce a number of terminals connected to the electrodes, as taught by Ryan (col. 1, lines 7-9), thereby reducing the cost of manufacturing the PDP device.

Regarding to claims 3 and 4, as noting in figs. 25 and 26, Kanazawa further teaches that the first potential difference, $[50V - (-150V) = 200V]$, is larger than the second potential difference, which is substantially equal to zero volt (OV), because the even sustain electrode X is at the ground potential and hence no discharge transition takes place in the pair of the scanning electrode Y and the even sustain electrode X.

Regarding to claims 7 and 8, as noting in fig. 26 and at col. 20, lines 34-42), Kanazawa further teaches that after the period of odd line scan, forming the first or second auxiliary discharge.

Regarding to claim 11, Kanazawa further teaches the PDP comprising a plurality of non-discharge cells (non-discharge slits, see abstract) having non-discharge gaps (gaps about 200 micrometer, see fig. 25, col. 14, lines 24-28), each of discharge cells having a discharge gap about 100 micrometer (discharge slits, see fig. 25, col. 14, lines 24-28) and a plurality of barrier ribs (ribs or barriers 207E, best seen in fig. 1, col. 14, line 17).

9. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Applicants' Admitted Prior Art, hereinafter AAPA, and further in view of Gay et al (USPN: 5,086,257), hereinafter Gay.

As per claim above, as noting in figure 10 and the corresponding description, AAPA discloses an AC plasma display panel comprising an address electrode (a column electrode 108), t discharge cells having discharge gaps (DG) (each cell occupying a discharge area, see page 3, lines 22-23), a scan electrode (row electrode 104), a sustain electrode (a row electrodes 105), a dielectric layer (106A), a plurality of non-discharge cells having non-discharge gaps (NG) (page 4, lines 2-4) and a plurality of barrier ribs (110). Further, an address electrode (108) includes t strip portions (i.e., each portion, extending between two adjacent row electrodes (104) and including a display area and a non-display area, is considered as the claimed strip portion, see page 3, line 20 through page 4, line 5, and all strip portions are integrated to form a single address electrode), a scan electrode (104) includes t strip portions (i.e., each portion between two adjacent barrier ribs (110) is considered as the claimed strip portion of the scan electrode, and all

strip portions are integrated to form a single scan electrode 104), and a sustain electrode (105) includes t strip portions (i.e., each portion between two adjacent barrier ribs (110) is considered as the claimed strip portion of the sustain electrode, and all strip portions are integrated to form a single sustain electrode 105). AAPA further discloses discharge cells arranged on the same plane and arranged adjacently to each other through a non-discharge cell in a direction intersecting with a display line or parallel with the barrier ribs (110) (see fig. 10). Accordingly, AAPA teaches all the claimed limitations except that the discharge cell are arranged adjacently to each other through at least one the non-discharge cell in a direction **parallel** to a display line so that the barrier ribs separating the non-discharge cells from the discharge cells at least along a direction **parallel** with the display line.

However, Gay expressly teaches the discharge cell (pixel PX1, PX2, ..., figs. 1 and 4, col. 5, lines 58-59) are arranged adjacently to each other through at least one the non-discharge cell (a simple crossing Cs, figs. 1 and 4, col. 5, lines 50-51) in a horizontal direction **parallel** to a display line and in a vertical direction intersecting with the display line (figs. 1 and 4). It would have been obvious to one skilled in the art at the time of the invention was made to utilize Gay's teaching, i.e., the discharge cell arranged adjacently to each other through at least one the non-discharge cell in a horizontal direction **parallel** to a display line and in a vertical direction intersecting with the display line, in the PDP of AAPA, so that the barrier ribs separating the non-discharge cells from the discharge cells at least along a direction **parallel** with the display line, because this would increase the speed of obtaining the images displayed by the panel, as taught by Gay (col. 1, lines 7-10).

Double Patenting

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10. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

11. Claim 9 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 2 of Hashimoto et al. (USPN: 6,603,263 B1), hereinafter Hashimoto. Although the conflicting claims are not identical, they are not patentably distinct from each other because the patent and the application are claiming common subject matter, as follows: an AC PDP comprising an address electrode including t strip portions (a plurality of strip third electrodes, see Hashimoto, col. 35, line 7), t discharge cells (a plurality of discharge cells, see Hashimoto, col. 34, lines 41-44), a scan electrode including t strip portion (Hashimoto, col. 34, lines 53-54, col. 34, line 66 through col. 35, line 4), a sustain electrode (Hashimoto, col. 34, lines 53-56, col. 34, line 66 through col. 35, line 4), a dielectric substance (Hashimoto, col. 35, lines 5-6), a plurality of non-discharge cells (Hashimoto, col. 34, lines 45-52), and a plurality of barrier ribs (col. 34, lines 63-65).

Response to Arguments

12. With respect to the rejection under 35 USC 112, first paragraph, to claims 1-8, 10 and 11, Applicants' argument filed "there is no necessity for a sustain electrode to include two t strip portions if a scan electrode includes t strip portions", page 8, last paragraph, is not persuasive

because the disclosure, as pointed out by Applicants, specifically page 20, line 20, to page 21, line 6, does not render implicitly that the number of strip portions included in the X sustain electrode is not necessary to be double the number of strip portions included in the X sustain electrode, in order to perform the step of "applying a first voltage ... discharge cell" (see claim 1, last 4 lines), since the relationship of i_1 and i_2 (i_1 is not equal i_2) is not related to the number of strip portions in the X or Y electrode.

13. With respect to the rejection under 35 USC 103(a) to claims 1, 2, 5-8, 10 and 11, Applicants' argument filed "how the shift electrode in Ryan et al. is able to function as an addressing electrode in a device which requires three different electrodes as in the present invention", page 9, lines 13-14, is not persuasive, because the function of the addressing electrode in a DC PDP which requires two different electrodes, and the function of the addressing electrode in a AC PDP which requires three different electrodes, are substantially same, i.e., both for providing voltages to the discharge cells (or pixels) to write the image into the pixels, in accordance with the input video signal. Further see fig. 4, and col. 9, lines 50-66.

14. With respect to the rejection under 35 USC 103(a) to claim 9, see the new ground of rejection above.

Conclusion

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jimmy H. Nguyen whose telephone number is (703) 306-5422. The examiner can normally be reached on Monday - Thursday, 8:00 a.m. - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala can be reached at (703) 305-4938.

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Any response to this action should be mailed to:

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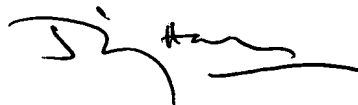
or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive,
Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding
should be directed to the Technology Center 2600 Customer Service Office whose telephone
number is (703) 306-0377.

JHN
October 15, 2003



Jimmy H. Nguyen
Examiner
Art Unit: 2673